APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,709	10/06/2000	Raghavan Anand	2-17-16	2111

		EXAMINER
7590	03/26/2004	RAO, ANAND SHASHIKANT

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ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *18 March 2004*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-20* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection as Paper 11 on 3/18/04. Since

this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in

37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been

withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/22/04 as Paper 9 has

been entered.

2.   Applicant's arguments with respect to amended claims 1-20 as filed in Paper 9 on 1/22/04

have been considered but are moot in view of the new ground(s) of rejection based on newly

cited sections of the previously applied references.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Aharoni

et al., (hereinafter referred to as "Aharoni").

Aharoni discloses a method of processing a video signal (Aharoni: figure 11) for

transmission (Aharoni: column 6, lines 60-65) over a heterogeneous network (Aharoni: column

7, lines 24-35), the method comprising the steps of: coding the video in a progressive video

coder (Aharoni: column 8, lines 52-64) so as to generate a progressive video bit stream (Aharoni:

column 9, lines 52-65), wherein the progressive coded video bit stream is configured to be

decodeable at any one of a series of increasing bit rates up to maximum bit rate (Aharoni:

column 10, lines 50-65), depending on which of a number of corresponding portions of the

progressive coded video bit stream area received by a decoder (Aharoni: column 9, lines 25-35),

the portions being arranged within the progressive coded video bit stream in a predetermined

sequence of increasing bit rates from an initial portion associated with a lowest one of the bit

rates to a final portion associated with a highest one of the bit rate rates (Aharoni: column 11,

lines 60-67; column 12, lines 1-20), and wherein each of the series of increasing bit rates produce

progressively better reconstructed quality at an output of the decoder (Aharoni: column 8, lines

1-19); transmitting the progressive coded video bit stream over a first part of the heterogeneous

network at a first one of the bit rates (Aharoni: column 11, lines 25-44); and selectively

transmitting one or more of the portions of the progressive coded video bit stream from the first

part of the heterogeneous network to a second part of the heterogeneous network (Aharoni:

column 6, lines 45-50), the one or more portions being associated with a second one of the bit

rates lower than the first bit rate (Aharoni: column 10, lines 50-64), the one or more portions and

the associated second bit rate being selected based on at least in part on one or more of: an error

detected in the transmission over the first part of the heterogeneous network (Aharoni: column 9,

lines 35-67; column 10, lines 1-21); and a characteristic of the second part of the heterogeneous

network (Aharoni: column 17, lines 40-67), as in claim 1.

Regarding claim 2, Aharoni discloses that the progressive coded video bit stream

corresponds to a given group of frames of the video signal (Aharoni: column 10, lines 20-50), as

in the claim.

Regarding claim 3, Aharoni discloses that each of the corresponding portions is

associated with a different bit rate (Aharoni: column 10, lines 52-60), as in the claim.

Regarding claim 4, Aharoni discloses that a subset of the corresponding portions are

associated with different frame rates (Aharoni: column 7, lines 1-6), as in the claim.

Regarding claim 5, Aharoni discloses that a subset of the corresponding portion are

associated with different spatial resolutions (Aharoni: column 7, lines 1-3), as in the claim.

Regarding claim 6, Aharoni discloses that a subset of the corresponding portions are

associated with different signal-to-noise ratios (Aharoni: column 9, lines 57-67; column 10, lines

1-20), as in the claim.

Regarding claim 7, Aharoni discloses that the particular portions of the progressive coded

video bit stream are received over the first part of the heterogeneous network determine a

corresponding amount of the bit stream that will be transmitted over the second part of the

heterogeneous network to the decoder for decoding a particular one of the series of increasing bit

rates (Aharoni: column 13, lines 10-55), as in the claim.

Regarding claim 8-9, Aharoni discloses that the wired network connection comprises a

wired Internet connection (Aharoni: column 6, lines 35-45), as in the claims.

Aharoni discloses an apparatus for use in processing a video signal (Aharoni: figures 1-

2), the video signal being coded so as to generate a progressive video bit stream (Aharoni:

column 9, lines 52-65), wherein the progressive coded video bit stream is configured to be

decodeable at any one of a series of increasing bit rates up to maximum bit rate (Aharoni:

column 10, lines 50-65), depending on which of a number of corresponding portions of the

progressive coded video bit stream area received by a decoder (Aharoni: column 9, lines 25-35),

and wherein each of the series of increasing bit rates produce progressively better reconstructed

quality at an output of the decoder (Aharoni: column 8, lines 1-19), the progressive coded video

bit stream being transmitted over a first part of the heterogeneous network at a first one of the bit

rates (Aharoni: column 11, lines 25-44), the apparatus comprising: a network element coupled

between the first part and the second part of the heterogeneous network (Aharoni: column 6,

lines 45-55), the network element being operative to selectively transmitting one or more of the

portions of the progressive coded video bit stream from the first part of the heterogeneous

network to a second part of the heterogeneous network (Aharoni: column 6, lines 45-50), the one

or more portions being associated with a second one of the bit rates lower than the first bit rate

(Aharoni: column 10, lines 50-64), the one or more portions and the associated second bit rate

being selected based on at least in part on one or more of: an error detected in the transmission

over the first part of the heterogeneous network (Aharoni: column 9, lines 35-67; column 10,

lines 1-21); and a characteristic of the second part of the heterogeneous network (Aharoni:

column 17, lines 40-60), wherein the portions being arranged within the progressive coded video

bit stream in a predetermined sequence of increasing bit rates from an initial portion associated

with a lowest one of the bit rates to a final portion associated with a highest one of the bit rate

rates (Aharoni: column 11, lines 60-67; column 12, lines 1-20); as in claim 10.

Regarding claim 11, Aharoni discloses that the progressive coded video bit stream corresponds to a given group of frames of the video signal (Aharoni: column 10, lines 20-50), as in the claim.

Regarding claim 12, Aharoni discloses that each of the corresponding portions is associated with a different bit rate (Aharoni: column 10, lines 52-60), as in the claim.

Regarding claim 13, Aharoni discloses that a subset of the corresponding portions are associated with different frame rates (Aharoni: column 7, lines 1-6), as in the claim.

Regarding claim 14, Aharoni discloses that a subset of the corresponding portion are associated with different spatial resolutions (Aharoni: column 7, lines 1-3), as in the claim.

Regarding claim 15, Aharoni discloses that a subset of the corresponding portions are associated with different signal-to-noise ratios (Aharoni: column 9, lines 57-67; column 10, lines 1-20), as in the claim.

Regarding claim 16, Aharoni discloses that the particular portions of the progressive coded video bit stream are received over the first part of the heterogeneous network determine a corresponding amount of the bit stream that will be transmitted over the second part of the heterogeneous network to the decoder for decoding a particular one of the series of increasing bit rates (Aharoni: column 13, lines 10-55), as in the claim.

Regarding claim 17-18, Aharoni discloses that the wired network connection comprises a wired Internet connection (Aharoni: column 6, lines 35-45), as in the claims.

Aharoni a video transmission system (Aharoni: figures 1-2), comprising: a progressive coder operative to code a video signal so as to generate a progressive video bit stream (Aharoni: column 9, lines 52-65), wherein the progressive coded video bit stream is configured to be

decodeable at any one of a series of increasing bit rates up to maximum bit rate (Aharoni:

column 10, lines 50-65), depending on which of a number of corresponding portions of the

progressive coded video bit stream area received by a decoder (Aharoni: column 9, lines 25-35),

the portions being arranged within the progressive coded video bit stream in a predetermined

sequence of increasing bit rates from an initial portion associated with a lowest one of the bit

rates to a final portion associated with a highest one of the bit rate rates (Aharoni: column 11,

lines 60-67; column 12, lines 1-20), and wherein each of the series of increasing bit rates produce

progressively better reconstructed quality at an output of the decoder (Aharoni: column 8, lines

1-19); a heterogeneous network comprising at least a first part and a second part (Aharoni:

column 7, lines 25-30), the progressive coded video bit stream being transmitted over a first part

of the heterogeneous network at a first one of the bit rates (Aharoni: column 11, lines 25-44); and

a network element coupled between the first part and the second part of the heterogeneous

network (Aharoni: column 6, lines 45-55), the network element being operative to selectively

transmitting one or more of the portions of the progressive coded video bit stream from the first

part of the heterogeneous network to a second part of the heterogeneous network (Aharoni:

column 6, lines 45-50), the one or more portions being associated with a second one of the bit

rates lower than the first bit rate (Aharoni: column 10, lines 50-64), the one or more portions and

the associated second bit rate being selected based on at least in part on one or more of: an error

detected in the transmission over the first part of the heterogeneous network (Aharoni: column 9,

lines 35-67; column 10, lines 1-21); and a characteristic of the second part of the heterogeneous

network (Aharoni: column 17, lines 40-67), as in claim 20.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aharoni et al.,

(hereinafter referred to "Aharoni") in view of Chou et al., (hereinafter referred to as "Chou").

       Aharoni discloses processing a video signal (Aharoni: figures 1-2), the video signal being

coded so as to generate a progressive video bit stream (Aharoni: column 9, lines 52-65), wherein

the progressive coded video bit stream is configured to be decodeable at any one of a series of

increasing bit rates up to maximum bit rate (Aharoni: column 10, lines 50-65), depending on

which of a number of corresponding portions of the progressive coded video bit stream area

received by a decoder (Aharoni: column 9, lines 25-35), the portions being arranged within the

progressive coded video bit stream in a predetermined sequence of increasing bit rates from an

initial portion associated with a lowest one of the bit rates to a final portion associated with a

highest one of the bit rate rates (Aharoni: column 11, lines 60-67; column 12, lines 1-20), and

wherein each of the series of increasing bit rates produce progressively better reconstructed

quality at an output of the decoder (Aharoni: column 8, lines 1-19), the progressive coded video

bit stream being transmitted over a first part of the heterogeneous network at a first one of the bit

rates (Aharoni: column 11, lines 25-44); and implementing the step of selectively transmitting

one or more of the portions of the progressive coded video bit stream from the first part of the

heterogeneous network to a second part of the heterogeneous network (Aharoni: column 6, lines

45-50), the one or more portions being associated with a second one of the bit rates lower than

the first bit rate (Aharoni: column 10, lines 50-64), the one or more portions and the associated

second bit rate being selected based on at least in part on one or more of: an error detected in the

transmission over the first part of the heterogeneous network (Aharoni: column 9, lines 35-67;

column 10, lines 1-21); and a characteristic of the second part of the heterogeneous network

(Aharoni: column 17, lines 40-67), as in claim 19. However, even though Aharoni discloses the

use of a computing system (Aharoni: column 7, lines 50-55), it fails to disclose an article of

manufacture comprising a storage medium for storing one or more software programs for use in

processing a video signal for transmission over a heterogeneous network, as in the claim. Chou

discloses the well known methodology of implementing a video processing method by means of

software routines stored on a computer readable medium (Chou: column 6, lines 10-35) in order

to allow for video processing at remote sites (Chou: column 6, lines 40-45). Accordingly, given

this teaching it would have been obvious one of ordinary skill in the art to incorporate Chou's

teaching of software implementation with the Aharoni video processing system in order to allow

for processing at remote sites. The Aharoni video processing system, now being modified to be

implemented by software on a computer readable media as shown in Chou, has all of the features

of claim 19.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andy S. Rao whose telephone number is (703)-305-4813. The

examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chris S. Kelley can be reached on (703)-305-4856. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy S. Rao
Primary Examiner
Art Unit 2613

ANDY RAO
PRIMARY EXAMINER

asr
March 25, 2004